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ABSTRACT

The purpose of this paper is to demonstrate that children's use of Japanese case particles obeys the grammatical principles introduced at the earlier stage of language development. In previous studies concerning the acquisition of Japanese case examined through the experimental method, it has been suggested that children acquire the functional use of case particles at around 5 years of age. This study examines the performance of Japanese case particles in children's natural speech in 2- to 5-year-olds within the framework of the theory of generative grammar. Data focusing on the phenomena "case marker drop" is analyzed. In conclusion, this paper demonstrates that 2-year-olds use Japanese case particles in much the same way that adults do and it will be further suggested that their use of case particles obeys the hierarchical structure of the Japanese language as well as that of the semantic structure. (VWL)

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THE PERFORMANCE OF THE JAPANESE CASE PARTICLES IN CHILDREN'S SPEECH: With Special Reference to ga and O

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THE PERFORMANCE OF THE JAPANESE CASE PARTICLES IN CHILDREN'S SPEECH: With Special Reference to *ga* and *o*

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1. INTRODUCTION

The study of first language acquisition in Japan has been examined through collecting a certain specific child's utterances extended over a long time and designing experiments. We find, however, that there are very few studies combined with linguistic theory.

The main purpose of this paper is to demonstrate that children's use of the Japanese case particles obeys the grammatical principles introduced at the earlier stage of language development. In previous studies concerning the acquisition of Japanese case particles examined through the experimental method, it has been suggested that children acquire the functional use of case particles at around 5 years of age. (Hayashibe,1975; Sano,1977; Iwatate,1980; Hakuta,1982; Goto,1988; and others) This study examines the performance of Japanese case particles in children's natural speech in 2 to 5-year-olds within the framework of the theory of generative grammar. I will analyze the data focusing on the phenomena of 'Case marker drop'.

In conclusion, this paper demonstrates that 2-year-olds use Japanese case particles in much the same way that adults do and it will be further suggested that their use of case particles obeys the hierarchical structure of the Japanese language as well as that of the semantic structure.

1.1 Assumption on the modularity of language acquisition process

The process of the language acquisition has been discussed among the linguists for many years. It involves several aspects of the human mind: the physical development, cognitive
mental development and the development of pragmatic social skills. The child must learn and comprehend the meaning of individual lexical items and sentences. He or she , then, must understand the linguistic form and put the form into proper use in real situations. He or she, then, finally acquires the language which is based on correct grammar.

Within the framework of the theory of generative grammar developed by Chomsky and others, acquisition of a language is achieved by Language Acquisition Devise (LAD) which the human possesses innately. LAD

consists of an initial stage of grammar called Universal Grammar, which has a small number of principles and some principles of learnability for individual languages' Intake data' which the child gets during the acquisition process makes UG active and this UG is realized as a core grammar of a particular language. In this paper I shall assume the module of language acquisition is that of Input Data + UG + Cognitive capacity.

1.2 The relation of semantic and syntactic structure

In preceding studies pertaining to early word comprehension and production, is suggested that the onset of comprehension is in advance of production and there is a tendency that children comprehend action words better than objects words in the early stage of utterance. (Benedict,1979) Cognitive semantic categories and syntactic categories relate reciprocally during the acquisition process. Grimshaw defines this process as Canonical Structural Realization(CSR). CSR(object) is projected on the nominal, and CSR(action) is projected on the verb in syntactic categories.

Verbs assign O-role directly or indirectly to the lexical items and each O-marked lexical item is projected on the syntactic structure by O-criterion.

The O-roles assigned to NPs are Agent, Theme, Goal, Source, Location, Patient, Experiencer, and Proposition as shown in (1).

(1) a. Taro-ga hon-o tukue-no-ue-ni oi-ta.
Agent Theme Location
(Taro put a book on the desk.)

b. Jiro-ga hana-o Junko-ni oku-t-ta.
Source Theme Goal
(Jiro presented flowers to Junko.)

c. Taro-ga Jiro-o tata-i-ta.
Agent Patient
(Taro hit Jiro.)

d. Sono news-wa kare-o odoroka-se-ta.
Experiencer
(The news suprised him.)

e. Kare-wa Hanako-ni isha-ni-iku-youni
proposition
settoku-shi-ta.
(He persuaded Hanako to go to see the doctor.)

A child who acquired a verb,'oku' (put) knows that the verb selects three arguments - [Agent, Theme, Location]. In other words, he/she who has

that the verb selects three arguments - [Agent, Theme, Location]. In other words, he/she who has acquired the verb, 'oku', knows that 'an Agent puts something on somewhere'.

Thus I put two hypotheses together in order to examine children's performance of case particles: 1) the function of the grammatical structure starts working at the early stages while the onset of the language acquisition is triggered by the cognitive capacity. 2) children use both semantic features and syntactic ones for their performance of their mother tongue from the early stage of language development.

2. Case marker drop in adult speech

Japanese case particles play the role of representing the grammatical relation of the noun phrase in a sentence but it is sometimes deleted in colloquial expressions. We will look at what makes this deletion possible through a theoretical hypothesis. Theoretical assumptions are made through examining three aspects - subject/object asymmetry, a stative sentence and unaccusative construction.

First, Saito(1985) suggested that the nominative Case marker can not be dropped whereas the dative case can be dropped as shown in below (2).

(2) a. Dare-*(ga) ki-ta-no
who-NOM come-PAST-Q
'Who came?'

b. (Kimi-wa) nani(-o) yonde-ru-no
you-TOP what-ACC reading-PRES-Q
'What are you reading?'
[Saito(1985) p.230]

Saito argued that this subject/object asymmetry with respect to the "Case marker drop" is derived from the difference of the Case assigned to each position. He assumes that object NPs in Japanese are assigned abstract Case but subject NPs are assigned nominative Case by INFL which is not abstract. Thus, the object Case marker assigned abstract Case to the NP can be dropped while the subject Case marker can not be dropped.

In contrast with Saito's analysis, Takezawa(1987) pointed out that there exists contexts where Case marker ga can be dropped. He argued that Case marker ga can be dropped in contexts of stative predicate, which we unconsciously accept as illustrated below in (3).

(3) a. Kimi-ni nani-(ga) wakar-u-no
you-DAT what-NOM understand-PRES-Q
'What do you understand?'

b. Kimi-ni dono mondai(-ga) deki-ru-ndai
you-DAT which problem-NOM can-do-PRES-Q
'Which problem can you do?'
[Takezawa(1987) p.124,125]

He analyzed that the NPs assigned ga in stative contexts have the object status and proposed the generalization of 'Case marker drop' on the premise that surface Case is an abstract Case as shown below.

(4) When an NP is adjacent to and c-commanded by V, then the Case marker attached to it (whether o or ga) can be dropped.
Case Marker Deletion (optional): Delete o/ga if the NP containing them is adjacent to and c-commanded by V in PF.
[Takezawa(1987) p.126]

Another phenomenon of dropping ga is pointed out by Nishigauchi(1992). He proposed the construction of the unaccusative sentence where the subject has Theme θ-role and the verb has two functions - transitive and intransitive such as 'aku' vs. 'akeru' (open). He analyzed that the subject NP in unaccusative sentence was generated onto the object position and that the case marker ga could be dropped.[6]

(5) a. Ah, doa-(ga) a-i-ta!
Oh, door-(NOM) open-PROG-PRES
(Oh, the door opened!)

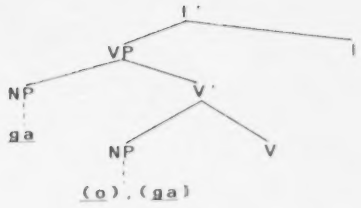
b. Asoko, nani-(ga) ochi-te-ru-ka mi-te- kite.
(Go and see what is on the ground over there.)

[Nishigauchi(1992)pp.45]

As a result of his analysis of case marker ni and preceding studies of the 'case marker drop' (Saito(1985), Shibatani(1986)), Nishigauchi suggested the following conditions of case marker drop.

(6) The condition of Case marker drop:
(i) governed by lexical category that assigns Case
(ii) adjacent to it and
(iii) receive strong s-selection of the lexical category

Here I assume that the conditions of the 'case marker drop' suggested by Nishigauchi(1992), that can be represented as follows.



3. Performance of case particles in children's speech

3.1 The data for analysis

In this section I analyze the use of case particles in children's natural speech focusing on 'Case marker drop'. I use three source shown in (7). The data in (a) and (b) are from individual children and data (c) contains 2500 utterances of 2 to 9 year-olds from various areas in Japan.

(7)
(a) Data of a three-year-old girl for the duration of 6 months
(b) Youji no Kotoba Shiryou (1),(5), National Japanese Research Institute
(c) Kodomo no Kotoba, Group Eruson

3.2 The data analysis

In section 2, I represented the phenomena of 'case marker drop' in adult speech and the conditions requisite for it, which obey the structural position of the Japanese language. That is, the case particle ga which assigned to NP in subject position can not be dropped whereas the case particle ga and o assigned to the object position can be dropped. How do native Japanese children, thus, make the distinction between the particles ga and o when acquiring language? In preceding studies, it was pointed out that a child comes to utter case particles at approximately 20 months to 26 months and he/she understands a sentence using the knowledge of case particles after four and a half years. If this is true, the following question will naturally arise. How do children especially under the age of 5 years use these case particles readily and correctly without having any formal grammatical background? To examine this interesting point I will analyze toddlers' spontaneous speech. The data containing subject and object were classified by age and

analyzed according to the categories which were distinguished from the positions on the structure as shown below (8).

(8)
A. Classification of case particle 'ga'

a. 'ga' assigned to NP of subject position

b. stative predicates
   1. adjective, stative predicate
      eg. "aru"(exist),"ooi"(many),"sukunai"(few), "iru"(need)
   2. NP of the object position with stative predicate
      eg. subject marked ga with follow predicates
          "wakaru"(understand), "dekiru"(can), "kikoeru"(hear), "hoshii"(want), "sukida"(like)

c. subject marked ga in an unaccusative construction

d. dropping ga

B. Classification of case particle o

a. object with o

b. object dropped o

Firstly, I analyzed the data of four to five years old children, who are said to have already acquired the knowledge of case particles. Among 180 cases containing a subject, 162 cases were with the overt case particle ga. That is, I found 18 cases dropped case particle ga. However I analyzed that these NPs which dropped ga were all classified to A-b and A-c in the above classification (8) except in one case. This means that those NPs dropped the case particles belonged to object position in the structure. As for the cases containing an object, among 144 cases with an object, the cases with overt o were 42.

From the results of the analysis of 4 to 5-year-olds, it was observed that they didn't drop case particles which were assigned to the subject position, while they tended to drop case particles assigned to the object position. This feature also tends to be true in adult's speech.

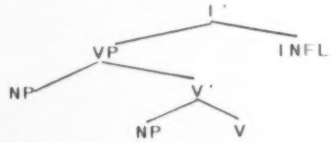
Then, how about younger children? Is this same phenomena reflected in the speech patterns of even younger children? The preceding studies suggested that they have not acquired the grammatical function of case particles yet. If this assumption is correct,

then, their speech performance should be correspondingly different from those of adults'. I analyzed the data for 2 to 3-year-olds according to the above classification (8) and observed a specific phenomena in their use of case particles. (Refer to Appendix 1.)

Among 326 cases containing the subject, 47 cases were uttered without the overt case particle ga and furthermore, almost all the NPs without the overt case particle ga were seen to be in the object position - the sentences with stative predicate or with unaccusative constructions. In the case of the object, 123 cases out of 161 dropped case particle o.

The results of these analysis showed that the use of case particles of 2 to 3-year-olds were the same as those of adults': they do not drop the case particle ga assigned to the subject position while they tend to drop case particles ga and o assigned to the object position.

(9) A 5-year-old Child's Utterance



Kotaro-chan ga
gamu de abuku (o) tuku-t-ta yo.

Kotaro-chan ga gamu de abuku (o) tuku-t-ta yo.
Kotaro-chan NOM chewing gum with bubbles (ACC)
foam-PAST.
(Kotaro foamed bubbles with chewing gum.)

To sum up the results of the above analyses, I have shown the following two points.

1. We found that there is an asymmetry between the subject position and the object position with respect to the case marker drop in toddlers speech. toddlers don't drop the case particles ga on the subject position while they often drop the case particles, ga and o on the object position. Their use of case particles is almost the same as that of adults.

2. It is assumed that even 2-year-olds' usage of Japanese case particles is related to the knowledge of the syntactic structure.

3.3 Performance of ga and O by Thematic Relation

I put forth the hypothesis that both syntactic features and semantic ones are already developed from the early stage of language development. According to this hypothesis, the following question arose. What are the semantic features of the noun both on a subject position and an object position? We can predict that there should be specific semantic features in toddlers' use of case particles. In this section, I will briefly examine how the semantic features are related to the child's use of the case particles by focusing on the O-role which will lead to syntactic structure. I will reanalyze the data shown in (7).

The possible O-role for a subject are the Agent role (10(A)), the Theme role (10(B)), and the source role (10(C)).

(10)

a. Ken-ga Jiro-o tata-i-ta.
   Agent Patient
   (Ken hit Jiro.)

b. Densha-ga tu-i-ta.
   Theme
   (The train arrived.)

c. Taro-ga Hanako-ni shashin-o oku-t-ta.
   Source Goal Theme
   (Taro sent a picture to Hanako.)

On one hand in it, then on the other hand, the possible O-roles for an object are the Theme role, the Patient role, and the Experiencer role. the Theme role can be assigned to both a subject and an object. Here I focused on the Agent role and the Theme role for this analysis. Verbs which select the Theme role as an argument have an 'action' meaning, that its, it affects something by moved or being exchanged. Miyagawa(1989) defines the character of this affectedness as:

(21)
A partial characterization of affectedness

a. That which is exchanged:
   (tori)-Kaeru 'exchange'

b. That which is created: tukuru 'make', kaku 'write', tateru 'build', kosiraeru 'concot', hanasu 'speak', yobu 'call out', sakebu 'cry out'

c. That which is converted: naosu 'correct, repair'

d. That which is extinguished, consumed, destroyed, or got rid of: taberu 'eat', nomu 'drink', korosu 'kill', nakusu 'lose, get rid of', usinau 'lose, wasureru 'forget'

[Miyagawa(1989) SYNTAX AND SEMANTICS: Structure and Case Marking in Japanese p.57]

All these are, however, semantic characterizations we need,thus, to define the notion Theme by an independent test for the syntactic purposes. Miyagawa suggested a test for themehood. I adopt the test to distinguish Theme from the other θ-role.

(22) INDEPENDENT TEST FOR THEMEHOOD

The construction consisted of the gerundive form of the verb (-te/-de) plus aru allows a transitive verb that assigns the Theme role to its object, which surfaces as the subject of the verbal complex V-te aru.

[Miyagawa(1989)]

For example, akeru 'open' assigns the Theme role to its object but aisuru 'love' does not according to the test as shown in (23) and (24).

(23) Doa ga akete aru.
Door NOM opened
'The door is opened.'

(24)*Taro ga aisite aru.
NOM loved
'Taro is loved.'

I analyzed the data in (7) to examine the relationships between the thematic property and children's use of the case particles.
A part of the data analysis is shown in Appendix 2.

As a result of the analysis, I found that there is a definite contrast between the Agent role and the Theme role. Children do not drop the case particle ga assigned to the Agent role while they often drop it assigned to the Theme role. As seen in the above section, the case particle o assigned to an object position can be dropped syntactically and it is suggested that most of the NPs which are dropped the case particle o on the object position is assigned the Theme role. The assumption can be made, therefore, that the case particle ga assigned to the NP with the Agent role is not dropped while the case particles assigned to the NP with the Theme role tend to be dropped.

4. Experiment

4.1 Purpose

I will present an experiment designed to investigate where or not toddlers have a grammatical knowledge of case particles when they interpret sentences. Through the analysis of children's spontaneous speech, it was found that children have the grammatical knowledge as well as the strategies based on meaning from the early stage of language development. In other words, children have two ways in which to express their language competence. They have to, however, depend on either one or another in order to interpret the meaning of a sentence in the case where both are not available. The experiment was, thus, designed to investigate whether or not children use grammatical knowledge in contexts where they can not interpret a sentence solely by its meaning.

4.2 Method

Subjects: 10 subjects, who are all mono-lingual native speakers of Japanese living in Osaka, were tested. 5 of them were 3-year-olds (range 3;3-3;9) and 5 of them were 4-year-olds (range 4;4-4;11)
Procedure: Each subject was tested individually. Seven types of stimuli sentences were presented, one at a time, as shown in (9):

(9) A: S-ga O-o Verb. (S-NOM O-ACC V)
Anpanman-ga Baikinman-o tataiteiru.
(Anpanman is hitting Baikinman.)

B: O-o S-ga Verb. (O-ACC S-NOM V)
Kirin-o Usagi-ga aratteiru.
(A giraffe is washing a rabbit.)

C: S-ga O-(*) Verb. (S-NOM O-(*ACC) V)
Kareipanman-ga Anpanman-(*) noseteiru.
(Kareipanman is putting Anpanman on his back.)

D: O-(*) S-ga Verb. (O-(*ACC) S-NOM V)
Neko-(*) Buta-ga oikaketeiru.
(A pig is chasing a cat.)

E: S-(*) O-o Verb. (S-(*NOM) O-ACC V)
Usagi-(*) Buta-(o) ketteiru.
(A rabbit is kicking a pig.)

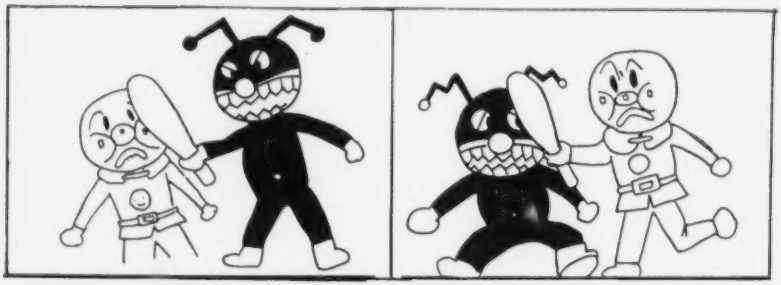
F: O-o S-(*) Verb (O-ACC S-(*) V)
Osaru-o usagi-(*) onbushiteiru.
(A rabbit is carrying a monkey on her back.)

G: N1-(*) N2-(*) Verb
Neko-(*) buta-(*) tataiteiru

((*) means that the case particle is deleted.)

The pictures for the stimulus sentence A.

(Anpanman ga Baikinman o tataiteiru)



Japanese is basically an SOV language. The examples A, C and E have the basic word order, while B, D and F are scrambled sentences. No case particles are assigned to the NPs in pattern G.

Two pictures were shown to the subject accompanied with the stimulus sentence. One picture was drawn to match the stimulus sentence and the other was drawn in the way that Agent and Theme in the stimulus sentence were reversed as shown in below example.

All the stimuli sentences were recorded and given out in order. The child was asked to select the picture which matched the stimulus sentence.

Results: The results are summarized in Table 1. These figures represent the correct response from the viewpoint of adult grammar. The figure in pattern G represent the response that the subject regarded the N1 as a subject in the stimulus sentence.

Table 1

+ / ++	A	B	C	D	E	F	G
	ga-o	o-ga	ga-( )	( )-ga	( )-o	o-( )	( )-( )
3	5	4	4	3	1	3	5
4	4	5	3	2	5	2	4

(+: PATTERN, ++: AGE) THE UNIT: a man

4.3 Discussion

From the results, it clearly appeared that both 3 year-olds and 4 year-olds judged the first noun as the subject in the case where no case particles were given in the stimulus sentence as shown in the pattern G. They, however, interpreted the scrambled sentence (B) correctly when both nominative and accusative case particles are assigned to the NPs. On the other hand, when one of the case particles was deleted, the responses were different according to the selected patterns. This implied that word order was not the only variable used in judging the stimuli sentences. Thus, this results showed that not only 4-year-olds but 3-year-olds also have the ability to contextualize using their grammatical knowledge of case particles if given an accompanied context, that is, they can interpret the context by word order if there are no case particles included.

Further evidence of early Japanese interpretation of scrambled sentences which demonstrates that short-distance scrambling constitutes part of the grammatical knowledge of 3-year-olds acquiring Japanese as a first language is also of importance. Otsu (1992) conducted experiments and found that three-year-olds can manipulate scrambled sentences using their grammatical knowledge with almost error-free results if given an appropriate discourse context.

In addition to these experimental results, I would like to present 2-year-olds' reaction to a scrambled transitive sentence.' The children quickly and correctly responded to the stimuli sentences with both basic word order and scrambled word one. If they were, however, given a stimuli sentence in which the case particles were assigned improperly, they responded nothing and were furthermore embarrassed. Some children said 'What?' when the stimulus sentence was given. It is suggested in previous experimental studies with a judgement task that early children have not yet acquired the grammatical knowledge of

Japanese case particles because they can not answer 'wrong' to the ungrammatical sentences (Goto,1988, Nakayama;1988). If this is correct, how can we explain the clear contrast between the reaction to grammatical sentences and the ungrammatical ones? If young children don't use the grammatical properties of case particle to interpret grammatical sentences, we should find their ambiguous responses to grammatical sentences as well as ungrammatical scrambled sentences. From my observation of two-year-olds performance, it is possible to suggest that even 2-year-olds use the grammatical knowledge of case particles to interpret a sentence but they can not judge whether it is correct or not because of their immature cognitive ability. It is, thus, concluded that infants have active grammatical knowledge of case particles.

5. Conclusion

In this paper, I represented toddler's use of case particles ga and o with respect to the 'case marker drop'.
Although it has been suggested that Japanese children acquire the grammatical function of case particles at around 5 years, the data analysis in this paper has showed that 2-year-olds use case particles in the same way that adults do and also their use of them is in obedience to the grammatical structure of Japanese.

Children need to know grammatical relations such like subject and object in a sentence in order to understand. In Japanese, it is case particles that play the important role in representing grammatical relations in a sentence. As in a language like English which restricts word order comparatively, children acquiring English easily know the grammatical relation by word order. Japanese, on the other hand, is said to be comparatively free of word order when compared with a language like English. It is, thus, suggested that children acquiring Japanese as a first language need to acquire case particles at an earlier stage of language development to distinguish between the different grammatical relations in a sentence. Furthermore, it is assumed from their usage of case particles that both syntactic and semantic properties work as module from the early stage of language development.

NOTE

1. This paper is based in part on my Master's thesis, submitted to Osaka University, January 1992. I am greatly indebted to Professor Taisuke Nishigauchi. I also would like to thank to Professor Takao Gunji for his invaluable advice and suggestions. I would like to express my appreciation to Dr. Yukio Otsu for his insightful comments and suggestions. Any mistakes that may remain are entirely my own.

2. Weler K. and Manzini R.(1987) argue about the relation between these two kinds of principle as follows.
"each choice that the child makes in his or her growing language is determined by a principle of language or by a principle of learning or by the interaction of these two kinds of principles."

3. Nakayama(1988) has reffered two kinds of linguistic data. The data available in the language enviornment are called "input data". They are to be distinguished from "intake data"(White, 1981), which are the data that are accessible to the child at a particular point in language development.

4. He points out that there is no possibility that the dropped maker is 'wa' not 'ga' as interrogative nouns are not assigned topic marker 'wa'.

5. Miyagawa(1989) analyzed the construction of the "ergative" sentence in which the verb selects the Theme role to the subject. According to his analysis, the subject of the intransitive verbs originates in the object position in D-structure and moves to the subject position at S-structure to acquire case because the ergative verb fails to furnish the case, as shown in (1).

6. Nishigauchi analyzed that the NP assigned nominative case maker 'ga' in unaccusative construction does not have the subjective characteristic but rather objective one. The NP in unaccusative construction is generated to the position governed by the verb. He suggests that the NP in the subject position corresponds to expletive in Japanese.

7. A pretest was designed to investigate children's reaction to the improper stimuli sentences against the given situation. The test was given to 8 subjects ranging in age from 2-year-old to 5-year-old. The experimenter talked with the each subject working puppets individually. The discourse contained the following stimuli patterns.

a) S-ga O-o Verb
b) O-o S-ga Verb
c) *O-ga S-o Verb
d) *S-o O-ga Verb

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APPENDIX 1

[2-year-olds' utterances with a subject]

Classification (a)

UTTERANCES	+
Akichan ga Ki-t-ta. (Akiko cut.)	a
Boku ga tuke-ta. (I attached.)	a
Boku ga oi-ta-no. (I put.)	a
Tomato to cheese ga ohanashi shite-ru-yo (The tomato and the cheese are talking to each other.)	c
Wanwan ga hadashi de aruiteru! (The dog is walking with bare feet)	c
Kewpie ga suwa-t-te kangai-te-ru-yo. (The kewpie doll is sitting and thinking.)	c

[+: DATA SOURCE in (7)]

Classification (b)

UTTERANCES	+
Nani ga mieru-no? (What can you see?)	a
Doko ni hitode ga iru-no? (Where is the starfish?)	c
Okaasan, ochi no naka nimo ohisama ga iru-yo. (Mommy, there is a sun in the house, too.)	c
Onaka ga itai. (I've got a stomach ache.)	c
Ah, Takeshi no yama ga nai! (There isn't Takashi's mountain.)	c
Techhan, medaka no gakko ga iru-yo. (Techhan, here is a scholl for medakas.)	c

Classification (c)

UTTERANCES	+
Obaachan, ha ga kowarecha-t-ta no? (Gran-ma, are your teeth broken?)	c
Kono jam mushi ga tuite-i-ru yo. (There is an insect in this jam.)	c
Obaachan, te kara chi ga deteru yo. (Grandma, there's blood coming from your hand.)	c

[2-year-olds' utterances without the nominative marker ga]

	UTTERANCES	+
b	Onetsu (ga) aru yo. (He has fever.)	c
b	Ashi (ga) makkuro dato barei (ga) dekinaiyo (I can not play ballet with dirty legs)	c
c	Okaasan, otukisama (ga) yabuke-te-ru yo (Mommy, there's a half moon.)	c

[2-year-olds's utterances with the object maker o]

Classification (a)

UTTERANCES	+
Ryukkusakku (o) mottoru-ka-ne?	c
(Do you have a backpack?)	
Okaasan, Tomochan oboshi (o) wasurecha-t-ta ne.	c
(Mommy, I've forgotten my hat.)	
Otosan, ashi (o) arainasai.	c
(Daddy, wash your legs.)	
Futon (o) orose.	c
(Put the bedding down.)	
Ice koori (o) taberu.	c
(Eat ice.)	

Classification (b)

UTTERANCES	+
Osora o tobitai-n-da-mon.	c
(I want to fly in the air.)	
Okaasan, kaze o ya-t-tuke-te, onegai.	c
(Mommy, knock the wind over, please.)	

APPENDIX 2

UTTERANCES	+	*
Karasu ga isoide ouchi ni kae-t-te-iku yo	4	c
Agent		
(A crow goes home in haste.)		
Kitto okaasan ga ma-t-te irun-da ne	4	c
Agent		
(For sure Mother is waiting.)		
Otamajakushi ga zoukingake (o) shiteru-n-da ne	4	c
Agent Theme		
(Tadpoles are wiping with their clothes.)		
Kei ga nao-shi-ta-n-da	4	c
Agent		
(Something was repaired by Kei.)		

(+: AGE OF THE CHILD, *: DATA SOURCE)

UTTERANCES	+	✱
Kotaro-chan ga gamu de abuku (o) tuku-t-ta yo.	4	c
Agent Theme		
(Kotaro blew bubbles with his chewing gum.)		
Watashi ga jibunn de tuku-t-ta no	4	c
Agent		
(I made it by myself.)		
Hakase ni na-t-te taimumashin (o) tuku-t-te..	4	c
Theme		
(I'll be the doctor and make a time machine..)		
Ochawan (o) aratou	4	c
Theme		
(Mommy is washing a rice-bowl.)		
Nande konnakoto (o) kaku no?	4	c
Theme		
(Why are you writing such a thing?)		
Osora o tobi-tai-n-da-mon	4	c
Theme		
(I want to fly in the air.)		
Boku datte onaka (ga) deteru zo.	3	c
Theme		
(I also have a potbelly.)		
Gamu (ga) tu-i-te ru	3	a
Theme		
(Chewing gum is attached.)		
Futon (o) oro-se.	2	c
Theme		
(I put the bedding down.)		
Datte yume ni obake (ga) uturu-n-da mon	3	c
Theme		
(Because a ghost appears in the dream.)		
Otousan ashi (o) arainasai	2	c
Theme		
(Daddy, wash your feet.)		
Namae ga ka-i-te-ari-masu	4	c
Theme		
(The name is written down.)		
Okaasan Tomochan oboushi (o) wasure-cha-t-ta ne	4	c
Theme		
(Mommy, I forgot to take a hat with me.)		

UTTERANCES	+	*
Hora, janba^(o) kite-ru-de-sho	3	c
Theme		
((I) am putting on a jacket.)		
Ofuton (o) katazuke-ru-n-da yo	3	c
Theme		
(Let's put the bedding in order.)		
Kore (o) taberu to tuyoi otoko ni	3	c
Theme		
nareru?		
(If I eat this, will I be come a strong man?)		
Mizu (o) ire-te-kure	4	c
Theme		
(Can you put water in (something).)		